

Application No. 10/573,301
Reply to Office Action of March 30, 2009

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Docket No.: 65140(70551)

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims

- 1 (Original). A manufacturing method of a liquid crystal display panel, comprising:
a sealant arranging step of arranging a sealant on a main surface of one of or each of two substrates to be bonded to each other;
a liquid crystal dropping step of dropping liquid crystal on one of said two substrates;
and
a bonding step of bonding said two substrates to each other, wherein said method further includes:
to be performed prior to said sealant arranging step, a deaerating step of arranging in a pressure-reduced atmosphere at least a substrate on which said sealant is to be arranged out of said two substrates; and
to be performed prior to said bonding step, a releasing step of releasing said pressure-reduced atmosphere by an inert gas.
- 2 (Original). The manufacturing method of a liquid crystal display panel according to claim 1, wherein
said releasing step is performed prior to said sealant arranging step.
- 3 (Previously presented). The manufacturing method of a liquid crystal display panel according to claim 1, wherein
said sealant arranging step is performed in a released atmosphere.
- 4 (Previously presented). The manufacturing method of a liquid crystal display panel according to claim 3, wherein
said sealant arranging step is performed within 30 minutes after said releasing step.
- 5 (Previously presented). The manufacturing method of a liquid crystal display panel according to claim 1, wherein

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said deaerating step includes a step of arranging said two substrates together in said pressure-reduced atmosphere.

6 (Withdrawn). The manufacturing method of a liquid crystal display panel according to claim 5, wherein

said releasing step is performed after said sealant arranging step and said liquid crystal dropping step.

7 (Withdrawn). The manufacturing method of a liquid crystal display panel according to claim 1, wherein

said releasing step is performed prior to said liquid crystal dropping step, and
said liquid crystal dropping step is performed within 30 minutes after said releasing step.

8 (Withdrawn). A manufacturing method of a liquid crystal display panel comprising:
a sealant arranging step of arranging a sealant on a main surface of one of or each of two substrates to be bonded to each other;

a liquid crystal dropping step of dropping liquid crystal on one of said two substrates;
and

a bonding step of bonding said two substrates to each other, wherein said method further includes:

to be performed prior to said liquid crystal dropping step, a deaerating step of arranging in a pressure-reduced atmosphere at least a substrate on which said liquid crystal is to be dropped out of said two substrates; and

to be performed prior to said bonding step, a releasing step of releasing said pressure-reduced atmosphere by an inert gas, wherein

said releasing step is performed prior to said liquid crystal dropping step, and
said liquid crystal dropping step is performed in a released atmosphere.

9 (Withdrawn). The manufacturing method of a liquid crystal display panel according to claim 8, wherein

said liquid crystal dropping step is performed within 30 minutes after said releasing step.

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10 (Withdrawn). The manufacturing method of a liquid crystal display panel according to claim 8, wherein

said deaerating step includes a step of arranging said two substrates together in said pressure-reduced atmosphere.

11 (Withdrawn). The manufacturing apparatus used in a manufacturing method of a liquid crystal display panel, the method including:

a sealant arranging step of arranging a sealant on a main surface of one of or each of two substrates to be bonded to each other;

a liquid crystal dropping step of dropping liquid crystal on one of said two substrates;

and

a bonding step of bonding said two substrates to each other, wherein said apparatus comprises:

pressure-reduced atmosphere creating means for arranging the substrates in a pressure-reduced atmosphere; and

releasing means for releasing said pressure-reduced atmosphere by an inert gas,

wherein

said pressure-reduced atmosphere creating means includes

a vacuum chamber,

a substrate arranging member for arranging the substrates in said chamber, and

a vacuum pump for evacuating said vacuum chamber, and wherein

said releasing means includes

inert gas introducing means for introducing an inert gas into said vacuum chamber.

12 (Withdrawn). The manufacturing apparatus of a liquid crystal display panel according to claim 11, wherein

said vacuum chamber is formed so that the two substrates to be bonded to each other can be accommodated.

13 (Withdrawn). The manufacturing apparatus of a liquid crystal display panel according to claim 11, wherein

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said manufacturing apparatus only comprises pressure-reduced atmosphere creating means and said releasing means.

14 (New). A manufacturing method of a liquid crystal display panel, comprising:

a sealant arranging step of arranging a sealant on a main surface of one of or each of two substrates to be bonded to each other;

a liquid crystal dropping step of dropping liquid crystal on one of said two substrates;

and

a bonding step of bonding said two substrates to each other, wherein said method further includes:

to be performed prior to said sealant arranging step, a deaerating step of arranging in a pressure-reduced atmosphere at least a substrate on which said sealant is to be arranged out of said two substrates; and

to be performed prior to said bonding step, a releasing step of releasing said pressure-reduced atmosphere by an inert gas;

wherein said releasing step is performed prior to said sealant arranging step and said sealant arranging step is performed in an inert gas atmosphere provided by the releasing step.